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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/006,729 | 12/04/2001 | Rupert Gall | A34822 - 071308.0263 | 1328 |

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08/25/2004

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EXAMINER

DINH, NGOC V

ART UNIT PAPER NUMBER

2187

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,729

Applicant(s)

GALL ET AL.

Examiner

NGOC V DINH

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to Amendment filed 07/17/2004.

Applicant's arguments filed July 17, 2004 have been considered by the Examiner and are deemed persuasive. According to the Applicant's remark that "industrial technical installation can be any type of actual manufacturing or assembly device such as robotic unit, a molding cutter, any type of printing press, etc", the final rejection of claims 1-7 based on Dean et al in the office letter dated May 07, 2004 is respectfully withdrawn and the following rejection based on Rangachari et al and Ueda is applicable.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-7 are rejected under 35 U.S.C 103(a) as being unpatentable over Rangachari et al PN 6,470,227, and in view of Ueda et al PN 6,577,912.

Per claim 1, Rangachari teaches an automation system [fig. 1] comprising an industrial technical installation [manufacturing equipment, 40, fig. 1; col. 6, lines 35-40]; and input and output unit coupled to the industrial technical installation [I/O interface 28; 42, Standard Mechanical Interface (SMIF), fig. 1]; a bus coupled to the input and output unit [8, fig. 1; col. 6, lines 40-48]; and a personal computer comprising a work drive unit [col. 5, lines 1-5; col. 6, lines 15-20], wherein work programs for the industrial technical installation and work data for the industrial technical installation are stored in the work drive unit [computer program 10, fig. 1].

Rangachari does not teach a back-up drive unit, wherein a backup copy of at least part of the work programs and work data are stored by means of backup program in the backup drive unit, so that part of the work programs and work data can be easily restored.

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Ueda teaches a computer device comprises a back-up drive unit, wherein a backup copy of at least part of the work programs and work data are stored by means of backup program in the backup drive unit, so that part of the work programs and work data can be easily restored [fig. 8-9; col. 3, lines 38-45].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further include a backup drive unit, as taught by Ueda into Rangachari's automation system. Doing so would reduce remarkably the time for restoration work when the HDD device breaks down [col. 4, lines 1-17].

Per claim 2, inherently Rangachari teaches the work programs comprises system programs and application programs, and the work data comprises system data assigned to system programs and application data assigned to application programs. This is because, a computer base must have a system programs [DOS, BIOS] to boot system up; the application programs [spreadsheet, database, backup program] are for interface between user and the system; furthermore system data and application data are the necessary input data when system programs and application programs are being executed.

Per claim 3, Rangachari does not teach the system programs comprise the back-up program.

Ueda teach system programs comprise the back-up program [col. 5, lines 60-65; fig. 6].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further include a backup program, as taught by Ueda into Rangachari's automation system. Doing so would reduce remarkably the time for restoration work when the HDD device breaks down [col. 4, lines 1-17].

Per claim 5, Rangachari teaches the claimed limitation as mentioned above.

Rangachari does not teach an auxiliary system drive unit, and further wherein an auxiliary operating system, its systems data and back-up program are stored in the auxiliary drive unit.

Ueda teaches an auxiliary system drive unit [e.g., backup, fig. 2] and further wherein an auxiliary operating system, its systems data and back-up program are stored in the auxiliary drive unit [fig. 8-9; col. 3, lines 38-45].

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to further include an auxiliary system drive unit, as taught by Ueda into Rangachari's automation system. Doing so would reduce remarkably the time for restoration work when the HDD device breaks down [col. 4, lines 1-17].

Per claim 6, inherently, Rangachari' teaches the drive units are logical drive units of a common physical drive unit. This is because a data storage system basically consisting of n physical disk drives which are assumed to be identical. Each physical disk drive may contain several logical drives. The data can be viewed residing on the physical disk drive as being partitioned into logical drive units of equal size. In drive array technology, logical drives are devices named by the logic of a software system, regardless of its physical relationship to the system. For example, a single physical disk drive (floppy disk drive, common physical disk drive) can simultaneously be, to the MS-DOS operating system, both logical drive A and drive B.

Per claim 7, Rangachari teaches the claimed limitation as mentioned above.

Rangachari does not teach the back-up drive unit is able to store at least two back-up copies.

Ueda teaches the back-up drive unit is able to store back-up copies. Ueda does not specifically teach that the back-up drive unit is able to store at least two back-up copies. However, It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a system with a backup drive be able to store at least two backup copies is no more than a matter of simplifying the system and in conformity with the desired design of the system.

3. Claim 4 is rejected under 35 U.S.C 103(a) as being unpatentable over Rangachari et al PN 6,470,227, in view of Ueda et al PN 6,577,912, and further in view of Chan US 2002/0194394.

Per claim 4, Rangachari-Ueda teaches the claimed limitations as mentioned above. Rangachari-Ueda does not teach the work drive unit has a system drive unit and an application drive unit, and the system programs and the system data are stored in the

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system drive unit, and the application programs and the application data are stored in the application drive unit.

Chan teach the work drive unit has a system drive unit and an application drive unit, and the system programs and the system data are stored in the system drive unit, and the application programs and the application data are stored in the application drive unit [col. 3, [0023-0024].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further include the teaching of Chan, as mentioned above, into Rangachari-Ueda's automation system. Doing so would make possible fast system operation on ramdisk as well as user flexibility and configurability. Furthermore, Partition drive unit into different drives (System drive, application drive, etc), which store either application data/program or system data/program separately, is well known in the art. By spreading partitions over different Volumes or drives would improve parallel processing of data, with each I/O stream on a separate I/O path. Partitioning a disk drive unit into different drives (e.g., system/application drive(s)) also promote high data availability, enabling application and utility activities to progress in parallel on different partitions of data.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Kim PN 6058335 discloses Automated technique for manufacturing hard disk drive.
- b. Ritscher et al PN 5838974 discloses automation system.
- c. Chan US 2002/0194394 discloses running Ram-disk based.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Ngoc Dinh whose telephone number is (703) 305-3023. The examiner can normally be reached on Monday-Friday 8:30 AM-5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald A. Sparks, can be reached on (703) 308-1756. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

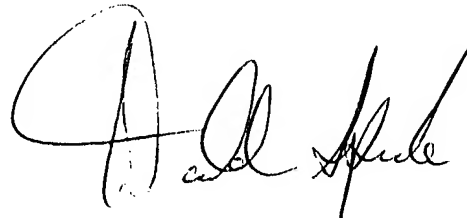


NGOC DINH

Patent Examiner

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August 11, 2004



DONALD SPARKS
SUPERVISORY PATENT EXAMINER